

**Example #5:** Using the information from example 4, what is the radius of the circular path taken by the electron once it enters the field?

$$F_c = F_{\text{mag}}$$
$$\frac{mv^2}{r} = qvB$$

$$r = \frac{mv}{qB}$$

$$= \frac{9.11 \times 10^{-31} (2.5 \times 10^7)}{1.6 \times 10^{-19} (4.1 \times 10^{-3})}$$

$$r = 0.035 \text{ m}$$